

## REMARKS

### **I. Front Page of Office Action**

The front page of the February 14, 2005 office action indicates that Claims 1-18 are pending, that claims 1-4 are rejected, and that claims 5-18 are withdrawn from consideration.

Claims 1-18 are canceled and replaced by new claims 19-33. Claim 19 is the only independent claim.

### **II. The Objections to the Specification Because of Informalities**

The examiner objects to the specification, stating that stating that:

The disclosure is objected to because of the following informalities:

Applicant is requested to check the paragraph breaks in the specification, some of which appear to be inappropriate, e.g., p. 30, lines 8-9. [Office action mailed February 14, 2005 page 2 lines 8-10.]

In reply, the applicant notes no such informalities in the applicant's file copy. A copy of the applicant's page 30 is attachment 1.<sup>1</sup> The examiner is authorized to replace the official PTO copy with attachment 1, as needed. The undersigned states that attachment 1 is an accurate copy of the applicants' page 30.

### **III. The Objections to Claims 5-18 Under 37 CFR 1.75(c) as Being in Improper Form**

The examiner objects to claims 5-18 Under 37 CFR 1.75(c) as being in improper form, stating that:

Claims 5-18 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from a multiple dependent claim. See MPEP§ 608.01(n). Accordingly, the claims 5-18 have not

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<sup>1</sup> A copy of the applicants' page 30 is attachment 1.

been further treated on the merits. [Office action mailed February 14, 2005 page 2 lines 11-13.]

In reply, the applicants submit that this objection is moot since these claims are canceled.

**IV. The Rejections of Claims 1-4 Under 35 USC 112, Second Paragraph**

The examiner objects to claims 1-4 Under 35 USC 112, second paragraph, stating that:

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, recitation "each of the non-inductive capacitors" is indefinite since it does not correspond to the singular "the capacitor" in the preceding phrase. If the capacitor 72 (Fig.3) is actually two or more capacitors, i.e. a "double non-inductive capacitor" (borrowing claim 3 language) the claim language should reflect this. Further, it is not clear from the claim whether the recited "capacitor of the filtering and interference suppression device" is the same as the "a capacitor, one terminal of which is electrically connected to a strip conductor . . . ."

In claim 2, recitation "with interposition of a capacitor" is vague. Does this mean a capacitor is between the second brush and ground? [Office action mailed February 14, 2005 page 2 line 15 through page 3 line 6.]

In reply, the applicants submit that these rejections are moot since these claims have been canceled.

**V. The Rejections of Claims 1-4 Under 35 USC 103(a) as Being Unpatentable over Bates (GB 2,217,136; Hereinafter "Bates") in View of Sakamoto et al. (US 5,420,553; Hereinafter "Sakamoto")**

The examiner rejects claims 1-4 Under 35 USC 103(a) as being unpatentable over Bates (GB 2,217,136; hereinafter "Bates") in view of Sakamoto et al. (US 5,420,553; hereinafter "Sakamoto"), stating that:

Claims 1-4, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bates (GB 2,217,136) in view of Sakamoto et al. (US 5,420,553). Bates teaches applicant's basic filtering and interference suppression device structure for an electric motor comprising: at least a first powering brush 11 for an armature commutator of the electric motor 10, a capacitor 28, one terminal of which is electrically connected to a strip conductor or lead 36 that electrically powers the first brush powering the armature commutator of the electric motor, and another terminal (see Fig.2) of which is electrically connected to a ground strip conductor (not numbered, see Fig.2), connected, in turn, to an electrical ground of the electric motor, characterized in that the capacitor/s 28/30 is/are directly attached to a circuit board (not shown; p.6, lines 2-18) including strip conductors, of which there is at least one powering strip conductor for a brush and one ground strip conductor.

Bates differs in that the capacitor/s 28/30 is/are not non-inductive capacitors, per se.

Sakamoto teaches a noise filter 12 (Fig.8) for suppressing electromagnetic interference including a non-inductive capacitor comprising a dielectric substrate 14, electrodes 20A/20B and ground patterns 18A/18B. Sakamoto's filter does not have an inductive component and therefore cannot cause any resonance or secondary noise emission (c.1, lines 48-51).

It would have been obvious to employ a non-inductive capacitor per Sakamoto in the noise suppression apparatus of Bates since it would have been desirable to eliminate inductive components which could cause resonance.

Regarding claim 2, as best understood, Bates teaches a second powering brush 13 which is connected to the electrical ground of the motor (Fig.2), with a capacitor 30 between the brush 13 and ground (Fig.2), and one terminal of the

capacitor is connected to a strip conductor electrically powering the corresponding brush (Fig.2), and the other ground terminal of which is connected to the ground (Fig.2).

Regarding claim 3, the plural shapes and plurality of electrodes suggested by Sakamoto would comprise multiple filtering and interference, non-inductive suppression capacitors in the form of a double non-inductive capacitor.

Regarding claim 4, the brush-bearing board in Bates forms the printed circuit board described at p.6, lines 2-18. [Office action mailed February 14, 2005 page 3 line 15 through page 4 line 19.]

In reply, the applicants submit that these rejections are moot since these claims have been canceled.

More, neither Bates nor Sakamoto disclose the filter structure defined by new claim 19, specifically, the internal shielding defined by the recitation "wherein said filter shield internal conductive structure shields said filter first internal conductive structure from said filter second internal conductive structure." This recitation is supported by the first and second paragraphs on page 10 of the specification. The new second paragraph on page 10 is supported, for example, by the incorporated by reference disclosures in 08/841,940 and 09/008,769.

Therefore, claim 19 should not be rejected over these references.

#### **VI. The Examiner's Suggestion to Copy a Claim for Interference**

The examiner comments regarding interference, stating that:

The following claim number one (1) from U.S. Patent No. 6,717,301 (related to U S Publication 2003-00048029) is suggested to applicant under 35 U.S.C. 135(a) for the purposes of an interference:

A filtering and interference suppression device for an electric motor comprising; a first powering brush for an armature commutator of the electric motor; a non-inductive capacitor,

having a first terminal electrically connected to a strip conductor that electrically powers the first powering brush, and a second terminal electrically connected to a ground strip conductor, connected, in turn, to an electrical ground of the electric motor, wherein the non-inductive capacitor is directly attached to a circuit board including the strip conductors; and a choke connected in series on the ground strip between a ground terminal of the non-inductive capacitor and the first powering brush.

The suggested claim must be copied exactly, although other claims may be proposed under 37 CFR 1.605(a). [Office action mailed February 14, 2005 page 4 line 21 through page 5 line 12.]

In reply, the applicants do not copy that claim because the subject matter defined by the copied claim is not commercially important due to the claim's requirement of "a choke connected in series on the ground strip between a ground terminal of the non-inductive capacitor and the first powering brush".

The applicants note that DeDaran narrowed their originally presented claim 1 to include the choke limitation during prosecution, in response to prior art rejections. The applicants believe that the noted choke limitation is admittedly non-obvious over the broader concept originally claimed in DeDaran's application - at least because the applicants believe that the choke detracts from filtering effectiveness.

#### **V. Closure**

This application should now be in condition for allowance. Should the examiner have any questions, he is urged to contact the undersigned at 703-415-0012.

Respectfully Submitted,

3/23/2005

Date

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